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Trends in Pension Cash-Out at Job Change and the Effects on Long-Term Outcomes

Philip Armour, Michael D. Hurd, and
Susann Rohwedder

1.1 Introduction

Promoting financial security in retirement is a major objective of US policies governing employer-provided pensions. To encourage workers and employers to participate, legislation mandates very large tax advantages for private-pension savings. These effectively represent "tax expenditures" to the federal government in the form of forgone tax revenues.

US policymakers have a substantial interest in the results of these large expenditures for promoting financial security in retirement. Is the private-pension system effectively enhancing financial security in retirement? What are the barriers or impediments to achieving economic security for old age among US workers? Which groups of workers are at greatest risk of falling short?

One feature of the US pension system in particular may jeopardize the objective of promoting retirement-income security: the ability of workers to cash out (i.e., withdraw funds from) their private-pension plans upon job separation. Federal rules aim to discourage such preretirement cash-outs. For example, the Tax Reform Act of 1986 introduced a 10 percent tax penalty on withdrawals from tax-advantaged accounts prior to the age of 59.5. Burman et al. 2012 showed that this tax penalty reduced preretirement cash-out of pension balances and increased rollovers into individual retirement

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accounts that preserve the tax-advantaged status of the pension balances. They also found reductions of cash-outs in response to a 1992 reform that imposed 20 percent tax withholding (without affecting the total tax liability).

These policy changes have reduced, but not eliminated, early withdrawals. As we document below, following workers in their early fifties in 1992 through subsequent job separations, 13.6 percent of those with a defined-contribution (DC) plan cashed out all or part of their plan; among workers with defined-benefit (DB) plans, 18.9 percent cashed out. For later cohorts the percent cashing out was substantially higher, even exceeding a 50 percent increase for the latest cohort in our study.

Several studies have investigated the causes of these early pension withdrawals now subject to withholding. It appears that a significant portion of these are made by households facing liquidity constraints and experiencing financial shocks (Amromin and Smith 2003; Scherpf 2010). Still, according to Butrica, Zedlewski, and Issa (2010), about half of early withdrawals from 401(k) defined-contribution pension accounts and individual retirement accounts (IRAs) could not be attributed to the events observed in the data, possibly indicating "unnecessary loss of retirement savings."

This chapter uses the long panel of data collected in the Health and Retirement Study (HRS), spanning up to twenty years for the earliest cohorts, to add new insights to prior research findings on this topic. Analyses in the current study addressed trends in pension cash-outs among older workers, cohort differences, and retirement-income security metrics at later years or ages and their relations to earlier job and cash-out choices. We did not restrict ourselves to looking at single cash-out actions, but incorporated cumulative measures of pension cash-out decisions. The chapter includes analyses of precipitating events that shed light on determinants of cash-out behavior and how it may have changed over time. We were especially interested in how the Great Recession affected cash-out choices. The HRS data allowed relation of variation in cash-out choices of older workers to a variety of outcomes observed in panel up to twenty years later, including assets, income, and health.

In an antecedent to this chapter, Hurd and Panis (2006) analyzed HRS data on cash-outs and other dispositions of pension entitlements among workers over the age of fifty who left their jobs between 1992 and 2000 (five waves of biennial HRS data). In this study, they found 13 percent of pension entitlements were cashed out, representing 5.3 percent of entitlement dollars. Among plans with a lump sum option, 20 percent were cashed out. However, their study highlighted an issue that had been underappreciated in prior research: whether a lump-sum distribution (LSD) harms retirement preparation depends critically on what the worker does with the money, and whether these cash-outs represent "leakage" from wealth available to finance consumption in retirement. Some LSDs may be rolled into an IRA, some may be annuitized, and some may be cashed out. Only the last of these may

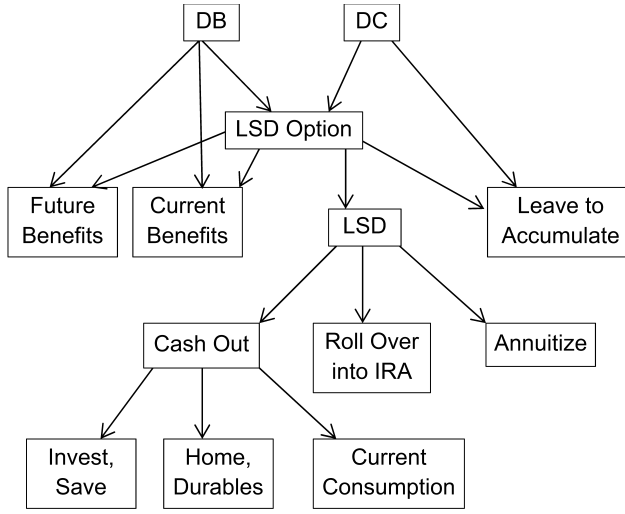

Fig. 1.1 Potential options for the disposition of pension entitlements, as illustrated in Hurd and Panis (2006)

harm retirement preparation, and even then some uses may function as savings. Hurd and Panis use the following graphic to clarify the situation. In the cash-out branch, some of the funds may be invested or saved directly and some may be invested in the home, which is a form of saving. While bringing such funds out of tax-sheltered accounts may not be optimal tax management, it is primarily spending for current consumption among those not facing binding credit constraints that poses the greatest harm to economic preparation for retirement (see figure 1.1).

Hurd and Panis established several facts that are important for understanding the causes and consequences of LSD decisions. Not all plans allow an LSD on job separation. In fact, the availability of LSDs varies dramatically across types of plans: a little over 80 percent of DC-plan participants report an LSD option versus just 42 percent of DB-plan participants.

Besides looking at the fraction of workers who cashed out their pensions, Hurd and Panis examined the implications of cash-outs for aggregate pension balances and net wealth, including nonretirement wealth. They identified two factors that implied a limited overall impact of cash-outs on retirement and total household wealth. First, cashed-out plans had lower average value than other plans, especially among those holding DC plans. Second, over 75 percent of cashed-out funds were either invested or used to pay off debt. Hurd and Panis (2006, 2226) conclude that "among workers that are within roughly ten years of retirement, only a small fraction of pension plan dollars is consumed immediately after job separation and that the vast majority is preserved for retirement income security."

While the Hurd and Panis paper provided a useful perspective up through the year 2000, the demographic and pension landscape has changed considerably with the decreasing importance of DB plans, the increasing pension entitlement of women, and changing trends in marriage and divorce. Furthermore, the Great Recession may have led to more cash-outs, harming particular segments of the population. These changes in the landscape warrant revisiting the Hurd and Panis analysis, which is the objective of this chapter.

1.2 Data

The HRS is a biennial longitudinal survey of persons at least fifty years of age. Since its launch in 1992, the HRS has gathered data on income, work assets, pension plans, health insurance, disability, physical health and functioning, cognitive functioning, and health-care expenditures, among other topics. Periodic additions of cohorts ensure the HRS remains representative of the population at least fifty years of age.

The analyses in this chapter are focused on several key variables. We analyzed self-reported data on employer-provided pensions for HRS respondents. The HRS asks whether respondents own such a pension, and whether it is a defined-benefit (DB) or a defined-contribution (DC) plan. It also asks respondents whether the pension plan allows for a lump-sum distribution. They are asked about the disposition of the pension plan at job separation or retirement: whether it was left with the former employer to accumulate; whether a full or partial LSD was taken; whether DB holders started drawing benefits on separation or chose to await future, larger benefits; whether the pension plan was lost with separation (likely where there is lack of vesting); or whether some other disposition occurred. For those who took an LSD, the survey asks whether the money was rolled into an IRA, converted to an annuity, or cashed out. For those who cashed out their pension plan, the HRS asks whether the money was saved or invested, whether it was used to pay off debt[1] or to purchase durable goods or a home, or whether it was used for nondurable consumption.

This research updates and expands that of Hurd and Panis in several directions. First, more waves of the HRS are now available. Hurd and Panis used five waves of HRS data from 1992 through 2000. Since then, six more waves of HRS surveys—from 2002 through 2012—have been conducted and the data made available for analysis, bringing not only an increase in sample size, but also an expansion in the types of analyses that could be

1. Paying off debt is conceptually the same as investing or saving the money when considering net asset levels, but this distinction is recorded in the HRS responses and shows patterns of interest, especially in the context of the Great Recession when the fraction reporting paying off debt was markedly higher.

conducted. In particular, because additional waves of data became available, differences across cohorts (e.g., those born before World War II and postwar "baby boom" cohorts) could be analyzed. A growing number of DC plans is also available for analysis, partly because of the time elapsed since 2000, but perhaps more importantly because DC plans have become increasingly prevalent in the US pension system, so workers in more recent cohorts are more likely to have them.

More recent cohorts are also likely to consist of more women who have earned pension entitlements at work. Their decisions regarding pension wealth may differ from those of men and merit additional analysis. Indeed, within a household, the behavior of both spouses is important in determining use or disposal of pension assets. The incorporation of more waves of HRS data with more female respondents who hold pension wealth promotes the analysis of pension wealth and its use or disposal from a household perspective.

The analysis has been updated to provide insights on the effects of the Great Recession on pension behavior, particularly on cash-outs. The earlier work by Hurd and Panis studied a period of relatively low unemployment and high stock market and housing returns. The years since then, particularly those surrounding the Great Recession that began in 2008, have not been as favorable. Unemployment in 2009 reached 10 percent, more than 2 percentage points higher than it was at any point between 1992 and 2000, and more than double what it was in the late 1990s. Though eventually recovering, the US stock market lost about half its value during the Great Recession, and housing values decreased by more than one-third, representing a large shock to wealth that may have led some workers to cash out their pensions. Indeed, using tax data on preretirement withdrawals, Argento, Bryant, and Sabelhaus (2015) verified that workers substantially increased withdrawal rates between 2004 and 2010, especially after 2007.

The long HRS panel supports analyses of retirement-security outcomes at later years or ages and how they relate to earlier job and cash-out choices. For example, consider a fifty-seven-year-old worker who cashed out a pension between 1992 and 1994. We have been able to observe that worker's subsequent economic position at age seventy-five in 2012, and we could then compare that worker with otherwise similar workers who did not cash out.

By gaining access to more years of data, we were able to analyze and compare a broader array of events precipitating cash-out, including whether different precipitating events led to differences in subsequent events. We could, for example, analyze and compare cash-outs resulting from adverse health changes, unemployment, shocks to household wealth caused by the Great Recession, marital disruption, and extractions to buy real estate during the housing bubble of 2004 to 2008 and the subsequent loss of equity and, possibly, home ownership during the Great Recession.

1.2.1 Changes in the Macroeconomic Environment, 1992–2012

We begin with an overview of the contextual changes occurring over the period 1992–2012. The first half of that period covers the HRS waves available to Hurd and Panis in conducting their analysis, and the second half folds in the years covered by the current work. We specifically focus on labor force participation (LFP) and the recessions that characterized the macroeconomy near the beginning and toward the end of the period of interest.

Labor Force Participation

Using Current Population Survey (CPS) data, we examined trends in LFP by sex. As shown in figure 1.2, between the early 1990s and the early 2010s, LFP among males ages sixty-five to sixty-nine increased substantially, whereas LFP among males forty to fifty-four decreased slightly. Men of intermediate age (fifty-five to sixty-four) increased their LFPs modestly, if at all. The LFPs among older women (figure 1.3), ages fifty-five to sixty-nine, increased at rates matching those of the oldest men in the analysis, although there appears to have been a leveling off following the start of the Great Recession. The LFPs among women in their forties exhibited a slight increase or stasis until around the turn of the century, and a slight downward trend thereafter.

Clearly, the most dramatic trends are the LFP increases among older men and women. These increases reflect trends toward later retirement. In the descriptive analyses, which compare cohorts over eight years, we thus expect to see trends toward relatively fewer separations due to retirement, which may alter the frequency of pension cash-outs.

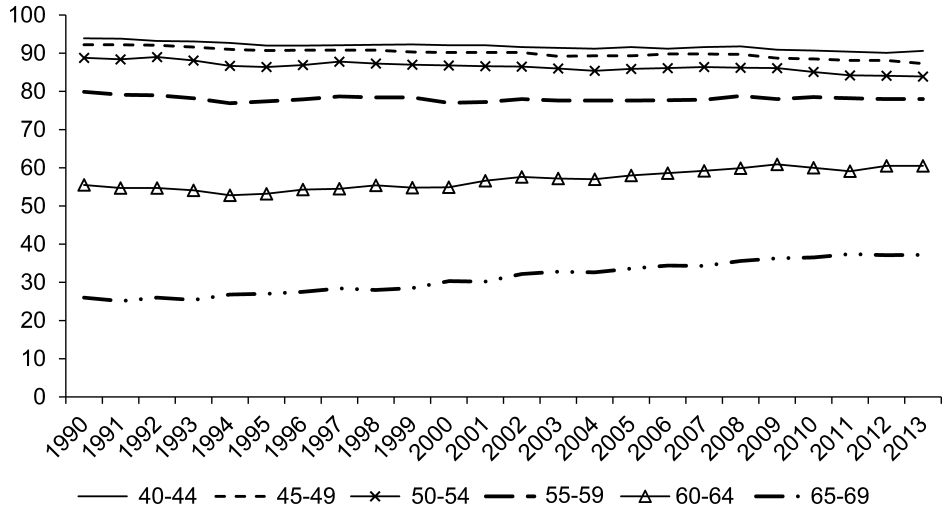

Fig. 1.2 Labor force participation, men

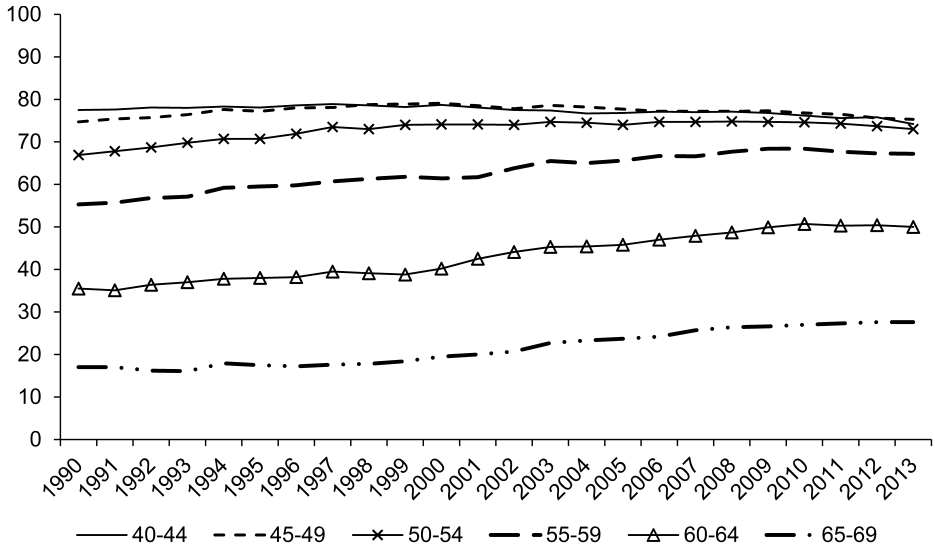

Fig. 1.3 Labor force participation, women

Macroeconomic Conditions

We are here concerned with the recession of 1991 and the Great Recession beginning in 2008. They are of interest because a recession is characterized by unemployment and adverse financial outcomes—loss of income and loss of assets, including the value of stocks and real property. Involuntary job losses could trigger pension cash-out particularly when accompanied by wealth losses.

Recession of 1991. Unemployment, which had been falling in the late 1980s from around 7.5 percent to 5 percent, turned around with the recession to exceed 7 percent again in 1992 (all figures seasonally adjusted). Stocks simultaneously dropped in value; the Standard & Poor's 500 index lost some 15 percent of its worth in 1991. Value of housing was not so dramatically affected. The Case-Schiller house price index had been falling for several years and bottomed out in 1991. (The Federal Housing Finance Agency's house price index showed no movement, but had just been established.)

Great Recession. While changes in macroeconomic indexes were noticeable in 1991, they were much more dramatic for the Great Recession that began in 2008 (see figure 1.4). The unemployment rate had been falling for several years to 4.3 percent, or down about 20 percent since 2002. In the second half of 2007 it began rising and continued doing so very rapidly until the end of 2009, when it topped out at more than 10 percent.

The Standard & Poor's 500 index had been rising since 2003, making

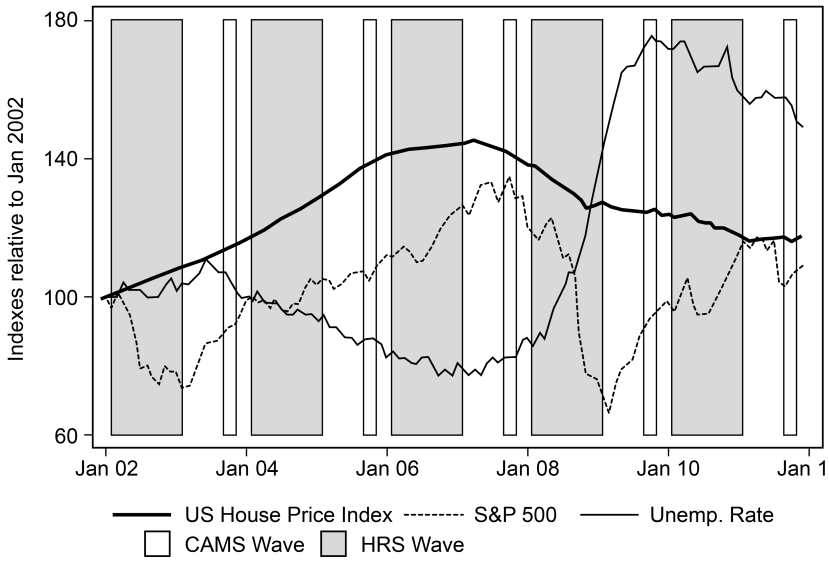

Fig. 1.4 Fluctuations in US house prices, the S&P500, and the unemployment rate

up some losses from 2002 and eventually reaching some 35 percent over the 2002 datum. It then plummeted through 2008, losing more than half its value. The Federal Housing Finance Agency (FHFA)'s US house price index had increased dramatically, by about 40 percent, between 2002 and the middle of 2007. It then began a long downturn that by early 2011, when it leveled off, it had lost almost half of the gain.

1.3 Results

1.3.1 Cohort Comparisons

Table 1.1 defines the cohorts and shows sample sizes. For example, we follow as Group 1 the 5,355 people who entered the HRS with the 1992 wave of data collection. Of these 5,355 persons, 3,871 were working at entry, 2,161 were working with pension coverage, and 1,396 were working and covered by a pension plan allowing a lump-sum distribution (LSD). We follow these groups for eight years, as their participants age from fifty-one to fifty-six up to fifty-nine to sixty-four. Group 4 only entered in 2010, so insufficient time has elapsed for a longitudinal analysis; we use this group for baseline comparisons only.

Baseline Comparisons

Labor Force Status. Figure 1.5 shows labor force status at age fifty-one to fifty-six, as reported by the respondents in each group. Employment was

Table 1.1 Sample sizes of four groups used in analyses

	Sample size				
	Initial year observed in HRS	Age 51–56	Age 51–56 and working	Age 51–56 and working with pension coverage	Age 51–56 and working with pension coverage allowing LSD option
Group 1	1992	5,355	3,871	2,161	1,396
Group 2	1998	3,209	2,402	1,401	878
Group 3	2004	3,322	2,477	1,417	908
Group 4	2010	4,690	3,172	1,688	1,144

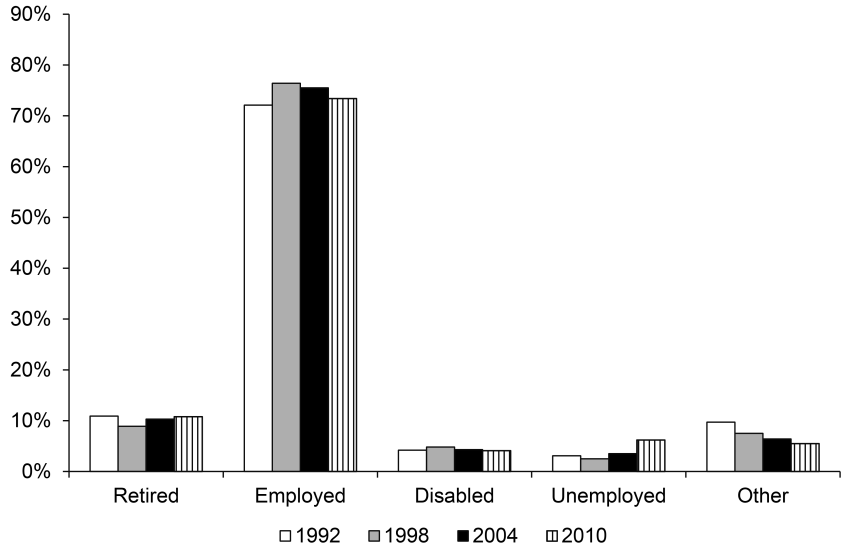

Fig. 1.5 Labor force status at ages fifty-one to fifty-six

lower in 1992 and 2010, and unemployment was higher particularly in 2010, reflecting the Great Recession.

Pension Coverage and Plan Type. Pension coverage improved modestly over the period of interest (see figure 1.6), increasing a few percentage points to a 60 percent coverage rate in 2010. There was a large change in the *type* of coverage, though. Most respondents who had pensions were covered by defined-benefit (DB) plans versus defined-contribution (DC) plans in 1992. By 1998, that pattern switched around. The trend from DB to DC still continues.

The great majority—over 80 percent—of persons having a DC pension plan are allowed by the plan to cash out via an LSD (see figure 1.7). The like

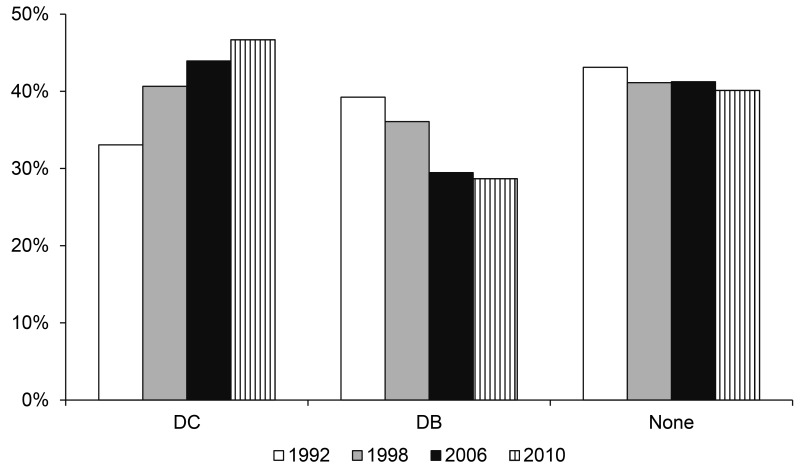

Fig. 1.6 Pension coverage and plan type, conditional on working

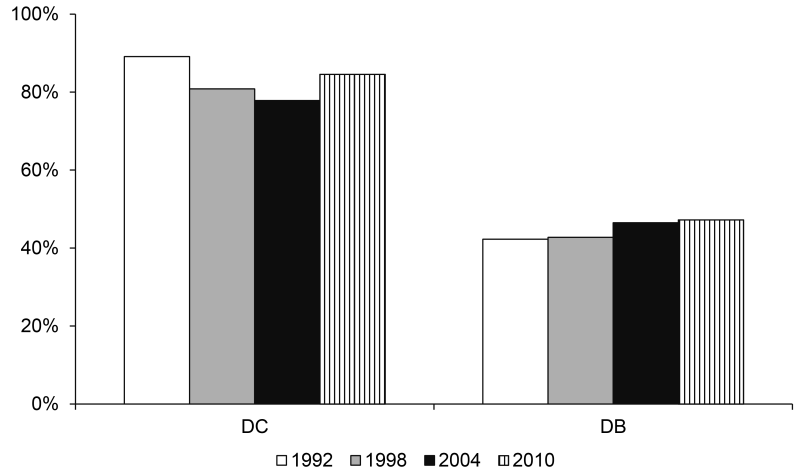

Fig. 1.7 Pension plan allows LSD, conditional on work and pension on job

percentage for DB plans is 47 in 2010, which represents a steady but modest increase since 1992.

Longitudinal Comparisons

Job Separations. Table 1.2 lists the number of job separations within HRS cohorts between their entry year (1992, 1998, or 2004, when they were fifty-one to fifty-six years old) and eight years later (when they were fifty-nine to sixty-four). These can be separations to another job, to unemployment, to retirement, or to any other employment status category. They also include

Table 1.2 **Number of persons with job separations over eight years**

	All		
Cohort	No. individuals with one or more job separations	No. individuals with any separations from a job with a pension plan	No. individuals with any separations from a job with a pension and cash-out option
1992	2,067	1,204	731
1998	1,386	901	567
2004	1,319	738	528

Note: Separation counts are larger for 1992 because the HRS cohort was larger.

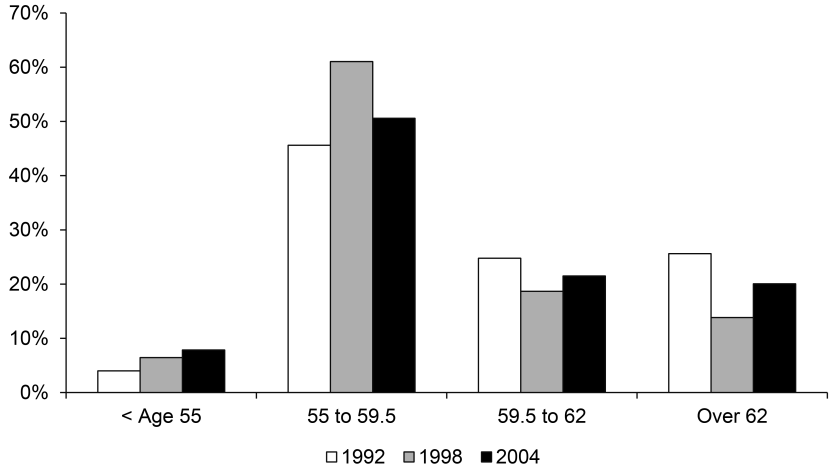

Fig. 1.8 **Age at time of cash-out**

separations by individuals not having a job at entry into the HRS who later take a job and then separate from that job, and they count multiple separations per individual where those occur.

We sought trends in age at separation and in labor force status following job separation among respondents with pensions. Figure 1.8 shows the age at which cash-outs occur. The large cash-outs appear to happen around ages fifty-nine to sixty, the age at which tax penalties for early withdrawals end. There is little evidence of any trend in age.

There were substantial differences by cohort in labor force status after job separation (see figure 1.9). The 2004 cohort (Group 3) was much more likely to be unemployed than the other two cohorts, whereas the 1992 cohort was much more likely to retire after a job separation and thus be less likely to be employed.

Table 1.3 shows the number of job separations over eight years among respondents covered by a pension plan, classified by whether the individual had a DC or DB plan. For example, there were 637 job separations among

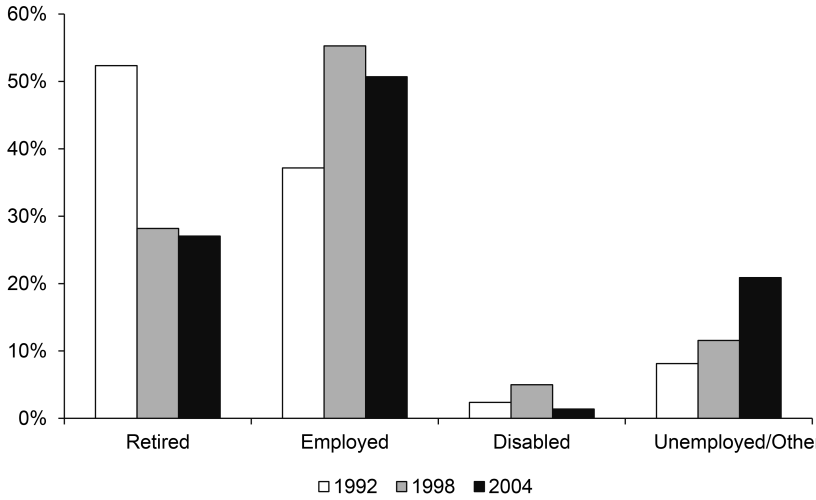

Fig. 1.9 Labor force status after job separation

Table 1.3 Job separations among those with a pension: number and percent by plan type

	Any DC		Any DB	
Cohort	Percent with DC	*N* with DC	Percent with DB	*N* with DB
1992	44.8	637	67.9	956
1998	57.4	614	62.5	642
2004	70.1	591	46.6	400

persons with DC plans, and those amounted to 44.8 percent of all job separations involving a pension plan. The table documents sharp increases in the percentage of respondents with pension-plan coverage who have a DC plan, and sharp decreases in the percentage with a DB plan. (Note that some persons have both types of plan, so the row totals exceed 100 percent.)

As the prevalence of DC plans was changing over the period of interest, so was the means of disposition of these plans at job separation (see table 1.4A). Cash-outs increased sharply from less than 14 percent to 24 percent (not conditioned on LSD availability), while rates of rolling plan assets into IRAs remained high, at around 30 to 40 percent. While cash-outs may be the principal worry from the retirement security point of view, IRAs do not necessarily protect savings well. These funds are no longer under the protection of the Employee Retirement Income Security Act (ERISA), and transfers to IRAs may presage spending.

If the analysis is altered to include only those respondents who had DC plans with LSD options, some differences are observed (see table 1.4B).

Table 1.4A **Pension disposition of DC plans at job separation, by cohort (over eight years each)**

	Cohort		
	1992 (%)	1998 (%)	2004 (%)
Cashed out	13.6	19.0	24.0
Rolled over into IRA	35.1	31.6	40.8
Annuitized	2.4	2.5	2.6
Left with employer	41.5	45.6	32.7
Transferred to new employer	0.0	2.4	2.8
Lost	0.3	1.3	3.9
Other	9.3	5.6	3.2

Note: Not conditioned on cash-out option being available, weighted.

Table 1.4B **Cohort comparison: Pension disposition of DC plans at job separation (over eight years), conditioned on availability of lump-sum distribution option**

	1992 (%)	1998 (%)	2004 (%)
Cashed out	18.9	26.7	29.1
Rolled over into IRA	49.0	44.5	49.5
Annuitized	3.3	3.5	3.2
Left with employer	26.0	29.3	21.9
Transferred to new employer	0.0	2.2	2.0
Lost	0.0	0.2	3.2
Other	5.7	4.3	2.3

Note: All percentages are weighted; categories are not mutually exclusive. Conditioned on cash-out option being available.

Cash-outs are higher in levels when the LSD option is available, but increase at about the same rate across cohorts. Rollover prevalence does not exhibit consistent trends across cohorts and is higher, but variably so, when the sample is restricted to these having the LSD option. The LSD-available group also shows consistently reduced probabilities of leaving savings with the employer (down 34 to 38 percent).

A like analysis was conducted for respondents with DB plans at job separations. As shown in table 1.5A, the prevalence of cash-outs increased with cohort from 12 percent to 18 percent. There was a much smaller rate of rollover to IRAs than there was for the DC people, but IRA rollover rates did increase across cohorts, from 8 percent to 21 percent. Over half the respondents with DB plans at job separation were drawing benefits from it—an important annuity feature of DB plans—but this had fallen by over 30 percent in the 2004 cohort.

If we restrict the sample to those having DB plans with an LSD option (table 1.5B), cash-out rates are considerable higher but there is no longer an

Table 1.5A **Cohort comparison: Pension disposition of DB plans at job separation (over eight years)**

	1992 (%)	1998 (%)	2004 (%)
Cashed out	12.5	12.0	18.0
Rolled over into IRA	8.1	11.2	20.6
Annuitized	0.0	0.0	0.0
Expecting benefits	29.3	28.8	28.7
Drawing benefits	57.3	52.6	36.4
Lost	2.7	1.9	2.9
Other	2.2	3.8	3.2

Note: Not conditioned on cash-out option being available, weighted.

Table 1.5B **Cohort comparison: Pension disposition of DB plans at job separation (over eight years), conditioned on availability of lump-sum distribution option**

	1992 (%)	1998 (%)	2004 (%)
Cashed out	37.7	29.2	29.3
Rolled over into IRA	24.5	27.3	33.6
Annuitized	0.0	0.0	0.0
Expecting benefits	19.2	16.7	21.7
Drawing benefits	45.0	43.3	24.5
Lost	0.5	0.4	3.6
Other	1.5	3.7	2.8

Note: All percentages are weighted; categories are not mutually exclusive. Conditioned on cash-out option being available.

increase across cohorts. The IRA rollover rates are higher and they markedly increased across cohorts. Fewer individuals are drawing benefits, though the cross-cohort profile is similar.

The prior work by Hurd and Panis established that among respondents who cash out their pension plan upon job separation, whether it was DB or DC, these pension plans were of lower average value than plans that were rolled over into IRAs or kept with employers. Table 1.5C shows a similar pattern across all cohorts in our analysis. The table has the cumulative distributions of the value of pension plans at job separation classified by whether the plan was cashed out.[2] For example, in 1992 about 49 percent of DC plans that were cashed out had value of less than $5,000, whereas just 20 percent of DC plans that were either left to accumulate or rolled into an IRA had value of less than $5,000. As far as trends in DC cash-outs are concerned,

2. The distributions are restricted to three categories of pension value (in 2000 CPI-U-RS dollars) due to differences in valuation elicitation and top-coding across surveys.

the 1998 and 2004 distributions are almost identical, but both are shifted toward higher values from the 1992 distribution. However, the distributions of DC plans that were not cashed out (three right-side columns) shifted in the same way, leading us to conclude that there was no trend in the cashing out of more valuable plans relative to all plans. With respect to DB plans, the distributions also show that less valuable plans are cashed out, but there is a clear trend toward relatively more cash outs of less valuable plans. For example, in 1992 23 percent of DB plans cashed out had value less than $5,000; in 2004 36 percent had value less than $5,000, even as there was little change in the value of DB plans rolled into IRAs.

If people have been cashing out retirement savings more often and at younger ages, what have they been doing with the money? Patterns of use of cashed-out retirement funds among persons with a DB plan are shown in table 1.6. Use patterns were similar for the 1992 and 1998 cohorts. Somewhat more than half was put into some other form of savings, and the remainder divided between spending and paying off debt. The 2004 cohort (data for 2004 to 2012) cut the percentage of cash-out funds going to other savings by half, doubling the percentage spent on debt and increasing spending by half. These patterns are consistent with a greater rate of negative shocks generated by the Great Recession and experienced by this cohort, which caused them to use the funds for immediate needs, spending and paying down debt.

Table 1.5C **Cumulative percentage distributions of pension values by whether cashed out at job separation (year 2000$)**

	DC plans					
	Cashed out			Left to accumulate or rolled into IRA		
Pension value	1992	1998	2004	1992	1998	2004
0	0.0	0.0	0.0	0.0	0.0	0.0
5,000	48.7	40.0	35.4	19.7	14.3	15.6
50,000	91.0	78.3	80.5	69.1	56.5	54.0
	DB plans					
	Cashed out			Rolled into IRA		
Pension value	1992	1998	2004	1992	1998	2004
0	0.0	0.0	0.0	0.0	0.0	0.0
5,000	22.8	33.9	36.4	10.8	13.0	11.8
50,000	59.8	64.3	82.9	48.6	58.7	51.3

Table 1.6 Uses of cash-out funds by those with a DB plan

	1992 (%)	1998 (%)	2004 (%)
Spent	24.8	21.9	31.0
Saved	55.9	55.7	29.2
Debt	19.3	18.6	38.3
Durables	0.0	3.7	1.5

Note: All percentages are weighted.

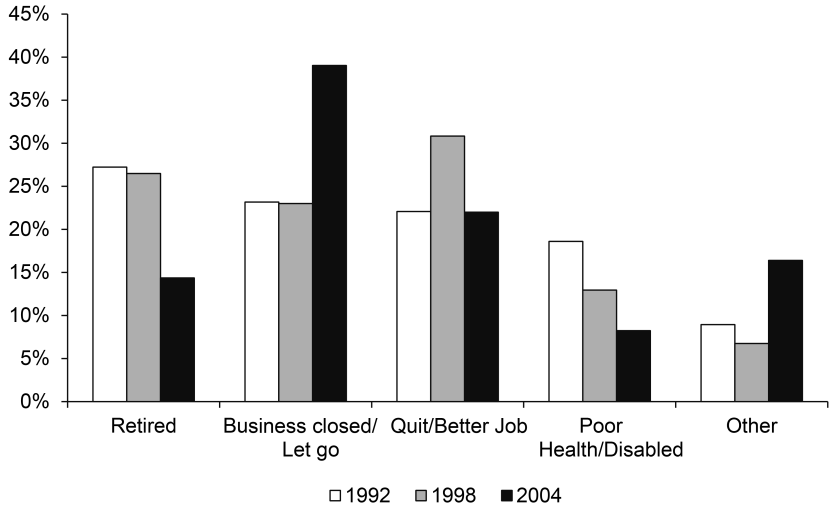

Fig. 1.10 Reason for job separation among DC cash-outs

1.3.2 Precipitating Events of Pension Cash-Outs

Closely related to the question of what cash-out recipients do with the money is why they sought the cash-out. A respondent's use of funds from a cash-out could reflect a specific event that precipitated the transfer. We have a window into this through HRS questions on reasons for job separations. Potential reasons include health shocks, unemployment, other wealth shocks (such as the Great Recession's effects on retirement savings), and family needs such as the effects of divorce or widowing or the need to support children financially. Answers to the HRS question on reasons for job separations are given for those with DC plans in figure 1.10 and for those with DB plans in figure 1.11.

Among individuals separating from a job with a DC plan (figure 1.10), the first three reasons shown—retirement, job loss, or voluntary separation—were all important reasons for separating from a job. However, retirement was less often the reason in the 2004 cohort and job loss—"let go" or "busi-

ness closed"—was more often the reason. Poor health or disability is less often cited by each cohort than by the preceding one.

Among those separating from a job with a DB plan, retirement was given as the reason by 40 to 55 percent of the respondents, whereas fewer than 20 percent gave any other reason (figure 1.11). Fewer retired in the 1998 and 2004 cohorts, but there was no increase in those responding "business closed/let go" for the 2004 cohort.

We next seek to learn what fraction of respondents cashed out their retirement plans when facing a shock around the time of job separation. The results of this analysis are shown in table 1.7. Among those separating with a pension, the overall fraction that cashed out for any reason was 18.6 percent. Rates were much higher among those affected by some specific shock. In particular, among those who were separating from a job with a pension and

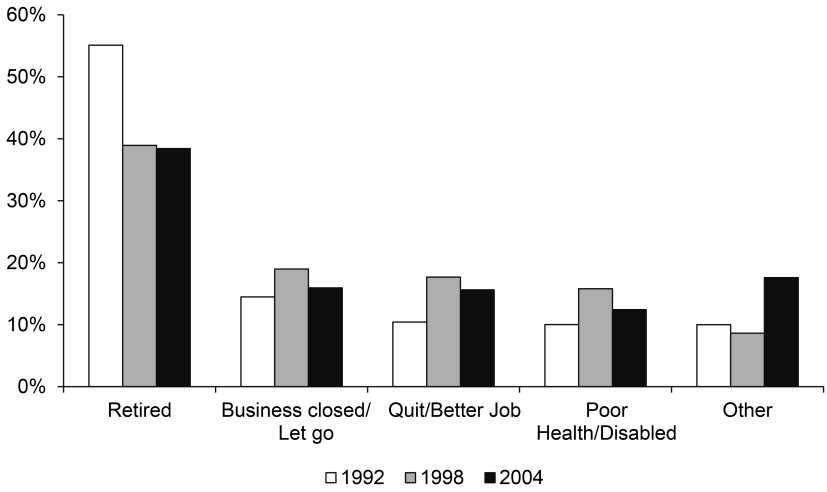

Fig. 1.11 Reason for job separation among DB cash-outs

Table 1.7 Among those separating with a pension, the percent that cashed out, by precipitating events

Shock at (or around time of) job separation	Fraction cashed out (%)
Lost health insurance	36.2
Got divorced	20.7
Became widowed	19.5
Became work-limited	22.1
Health worsens	19.4
Became poor health	26.5
Fell behind on mortgage	54.6
Any mortgage issues	47.2

falling behind on their mortgage, 55 percent cashed out, as did 36 percent of those losing their health insurance at job separation, and 26 percent of those whose health became poor.

1.3.3 Predictors of Pension Cash-Out: DB and DC Plans with Lump-Sum Option

To control for a number of covariates, we estimated several regression models of the relationship between cash-out of pension plans among those separating from jobs and twenty-six right-hand (explanatory) variables, including shocks. Probit estimation was employed on five models. In one model (designated "0") the dependent variable was cash-out of a DB or DC pension. The other models all pertained to cash-out of a DC plan. They differed from each other in whether the value of the DC plan and/or membership in the 2004 cohort (relative to the 1992 cohort) was included.

The analysis identified numerous variables predictive of cash-outs at a statistically significant level (see table 1.8). Being older, living in an area with a higher unemployment rate, and being African American were associated with a higher probability of a pension cash-out. Being wealthier or more educated or having a longer planning horizon, better health (self-reported), health insurance, or a higher DC plan value was associated with lower pension cash-out probability. Generally, these were similarly predictive across models.

Several variables were not predictive of pension cash-out at statistically significant levels (these included gender, subjective probability of survival, and disability). They also included membership in the 2004 cohort, which predicted cash-out but not at a statistically significant level (when the latter was dropped from the analysis, membership in the 1998 cohort became predictive of cash-out with $p < .05$).

1.3.4 Longitudinal Analyses: Consequences of Cash-Outs

By taking advantage of the HRS's longstanding longitudinal panel, we can track respondents who cashed out and compare outcomes (economic status, personal characteristics, survival) with those of participants who did not cash out. Specifically, we focus on the 1992 cohort and follow it for twenty years.

As shown in table 1.9, 25 percent of those who had never separated from a job died by 2012, compared with only 16 percent of those who had ever separated. This difference is at least partially due to the time window over which a job separation could occur: those who died early had fewer chances for job separation.

Among those who had ever separated with a cash-out, over 19 percent died compared with 16 percent among those who separated without a cash out. Most likely this difference is a reflection of a positive correlation between cash-out and economic shocks, and a negative correlation between

Table 1.8 **Probit coefficients predicting cash-out of pension plan among separations from jobs with pension coverage with lump-sum option**

	Dependent variable				
	DB or DC cash-out	DC cash-out			
	(0)	(1)	(2)	(3)	(4)
Age (continuous)	0.0102*	0.0218***	0.0214***	0.0368***	0.0370***
	(0.00546)	(0.00682)	(0.00702)	(0.00865)	(0.00887)
Group 2	0.0101	0.0721	0.0615	0.201**	0.184**
	(0.0661)	(0.0839)	(0.0877)	(0.0886)	(0.0932)
Group 3	0.0575	0.122	0.102	**Dropped**	**Dropped**
	(0.0712)	(0.0896)	(0.0918)		
Unemployment rate (1–100)	0.0619***	0.0374**	0.0454**	0.0469*	0.0570**
	(0.0143)	(0.0184)	(0.0187)	(0.0253)	(0.0256)
Male	–0.0309	–0.0521	0.00166	–0.0821	–0.0200
	(0.0474)	(0.0604)	(0.0618)	(0.0688)	(0.0715)
Black	0.226***	0.245***	0.275***	0.151	0.180*
	(0.0705)	(0.0881)	(0.0888)	(0.107)	(0.107)
Less than high school	0.0995	0.200**	0.190*	0.279***	0.285***
	(0.0821)	(0.0971)	(0.0993)	(0.0998)	(0.101)
More than high school	–0.119**	–0.191***	–0.159**	–0.209***	–0.169**
	(0.0520)	(0.0661)	(0.0672)	(0.0758)	(0.0773)
Log(total HH wealth)[a]	–0.0477***	–0.131***	–0.101***	–0.141***	–0.100***
	(0.0157)	(0.0217)	(0.0217)	(0.0265)	(0.0258)
Subjective prob(survive to 85) = 0	–0.0951	–0.119	–0.148	–0.0494	–0.0585
	(0.114)	(0.140)	(0.136)	(0.142)	(0.138)
Few months planning horizon	0.0589	0.165*	0.124	0.242**	0.203*
	(0.0789)	(0.0949)	(0.0968)	(0.103)	(0.104)

(*continued*)

Table 1.8 (continued)

	Dependent variable				
	DB or DC cash-out	DC cash-out			
	(0)	(1)	(2)	(3)	(4)
Five years or more planning horizon	–0.0191	–0.0407	–0.0513	–0.124*	–0.115
	(0.0498)	(0.0648)	(0.0659)	(0.0741)	(0.0761)
Health (increasing in healthiness, 1–5 scale)	–0.0392	–0.0713**	–0.0662**	–0.0630*	–0.0535
	(0.0240)	(0.0299)	(0.0304)	(0.0345)	(0.0349)
Any health insurance	–0.271***	–0.376***	–0.331***	–0.377***	–0.307**
	(0.0875)	(0.104)	(0.106)	(0.125)	(0.125)
Disabled	–0.319*	–0.0814	–0.0414	0.00375	0.0638
	(0.192)	(0.228)	(0.234)	(0.242)	(0.237)
Working	–0.0193	0.0981	0.0429	0.116	0.0589
	(0.0513)	(0.0654)	(0.0672)	(0.0753)	(0.0788)
DC plan value			–0.136***		–0.152***
			(0.0224)		(0.0245)
Missing DC plan value			–1.445***		–1.713***
			(0.237)		(0.257)
Observations	4,910	3,802	3,802	2,890	2,890

[a]Wealth includes net values of primary residence, secondary residence, other real estate, business, stocks and investment funds, bonds, bank accounts, and other savings.

Robust standard errors in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

Table 1.9 **Mortality among 1992 workers**

	Percent dead by 2012
Never separated	24.9
Ever separated	15.9
Ever separated with cash-out	19.3

Table 1.10 **Labor force status in 2012**

	Alive in 2012 and had ever worked with pension coverage
Retired	2,443
Working	855
Disabled	2
Unemployed	44
Other	17

cash-out and 1992 socioeconomic status: as will be shown below, those who cashed out were initially less wealthy, had lower incomes and were in worse health, all of which predict greater mortality.

Table 1.10 shows the labor force states in 2012 among those who survived and who worked with pension coverage over the twenty years between 1992 and 2012. Although, of course, most had retired, a nonnegligible fraction was still working.

Table 1.11 shows several measures of health and economic status in 1992 and in 2012 by employment and cash-out status.

Considering wealth, health, household income, and pension income among those who survived to 2012, those who cashed out do look worse off in 2012 compared to those who never separated or separated without cash-out, for either retirees or those still working. However, these individuals were also worse off in 1992, *before they cashed out*. Whether cashing out affects individuals negatively is therefore conflated with the types of people who choose to cash out: selection plays a role in attempts to isolate the effects of cashing out on these well-being measures. Further, as we have seen, cash-out is accompanied by shocks such as losing health insurance and falling behind on mortgages. Those events by themselves would lead to relatively worse outcomes in 2012, even were the individual not to cash out.

To separate the causal effect of cash-out from initial conditions that are correlated with cash-out and from precipitating shocks, we used as a classifying variable the availability of an LSD option in the pension plan. Under the assumption that the availability of an LSD was orthogonal to initial characteristics and to the probability of a shock during the twenty years of observation, the variation by availability shows whether giving an LSD option results in worse outcomes, and when properly used as an instrumental

Table 1.11 Economic measures in 1992 and 2012 conditional on survival to 2012

	Log(wealth)[a]	Household income[b]	Health[c]	Pension income
Retirees in 2012				
1992 measures for those retired in 2012				
Never separated	11.43	70,314	3.83	603
Ever separated	11.24	69,277	3.84	413
Ever separated with cash-out	10.78	53,130	3.47	245
2012 measures for those retired in 2012				
Never separated	11.43	32,665	3.16	3,374
Ever separated	11.38	33,853	3.11	2,410
Ever separated with cash-out	9.94	23,617	2.87	339
Workers in 2012				
1992 measures for those working in 2012				
Never separated	11.14	72,399	3.83	718
Ever separated	11.49	72,376	3.88	504
Ever separated with cash-out	10.98	59,600	3.73	655
2012 measures for those working in 2012				
Never separated	11.65	78,795	3.64	1,438
Ever separated	11.76	55,236	3.63	3,339
Ever separated with cash-out	10.94	45,022	3.49	1,339

[a]For components of wealth, see note to table 1.8.
[b]Includes income from individual earnings, household capital, employer pension or annuity, public pension (including Social Security), Supplemental Security Income, unemployment or workers' compensation benefits, and other government transfers.
[c]Self-reported health status on a five-point scale, where 1 corresponds to "very poor" and 5 corresponds to "excellent."

variable, how large the negative effects of cash-out are. Additionally, we limit our sample to DB plan holders, since the vast majority of DC plan holders report having an LSD option, providing little useful variation in availability of such an option.

We first note (see table 1.12) that about 10.5 percent of workers who apparently did not have an LSD option in their DB plan reported a DB cash-out. However, the classification is by DB LSD status on the 1992 job. Because of subsequent job changes (prior to 2012), a respondent who did not have an LSD option in 1992 could have shifted into a job that had one and on switching out of that job cashed out that pension. Alternatively, individuals may have misreported the availability of such an option, perhaps unaware of this option until job separation. Hurd and Panis (2006) also noted this. Nonetheless, the rates of DB cash-out are over 60 percent higher among the 893 reporting the option, showing that respondent reporting about DB LSD availability does have discriminatory power.

There are several results of interest. First, there is little apparent difference in the survival rates. Second, availability of a DB LSD option does

Table 1.12 **Long-term outcomes based on 1992 availability of LSD option in DB plans, among 1992 DB plan holders**

	LSD option in 1992		
	No	Yes	
Counts	1,548	893	
Fraction alive in 2012	80.22%	82.54%	Not significant
Conditional on being alive in 2012			
Any nonretirement separation by 2012	26.63%	31.15%	Significant at 10% level
Any retirement separation by 2012	93.80%	90.88%	Significant at 5% level
Both nonretirement and retirement separations	23.75%	25.15%	Not significant
Any DB cash-out	10.50%	17.00%	Significant at 0.1% level
Wealth in 2012	511,031	556,601	Not significant
Pension income in 2012	817	263	Not significant
Household income in 2012	35,922	38,302	Not significant

Sample: Fifty-one to sixty-one 1992 HRS Cohort, working in a job with DB pension coverage in 1992.

appear linked with a greater propensity to separate from a job preretirement, marginally significant at the 10 percent level, and a lower propensity to have retired, significant at the 5 percent level, both of which suggest that having a DB LSD option allows for more preretirement job switching. However, there appear to be no resulting statistically significant differences in household wealth or household income among those with a cash-out option; if anything, the averages for these outcomes are slightly higher for those with a DB LSD option. Although average pension income is lower for those with the DB LSD option, this difference is not statistically significant. Thus, this table does not support the view that a cash-out option has led to pension holders being less economically prepared for retirement.

1.4 Conclusions

Among policymakers concerned about economic security in retirement, the practice of cashing out retirement plans at the time of job separation has been a worry. Changes to the tax code have been enacted to discourage such transfers, but the limited evidence previously available suggests that cash-outs continue to pull substantial amounts out of retirement plans, even when households are not facing imminent liquidity challenges. In this chapter we have attempted to add to the literature on pension cash-out practices. Specifically, we draw on long-duration panel data from the Health and Retirement Study to learn what shocks can trigger cash-outs, whether and how cash-out practices are changing, and what might be their long-term consequences.

The events most likely to trigger cash-outs are issues with mortgages; in

particular, over half of those who fell behind on their mortgage cashed out pension accounts. Health was another important factor: more than one-third of those losing their health insurance at job separation engaged in cash-outs, and only one-quarter of those whose health turned bad did so.

Trends are of particular interest. To identify them, we took advantage of the HRS entering cohorts in 1992, 1998, and 2004. Most of these analyses showed that cashing out was becoming more frequent. Also, fewer job separations in the 2004 cohort were followed by retirement; among those with DC plans, more separations were due to employer closures and layoffs.

Ultimately, the concerns about economic security in retirement rest on the long-term welfare of the nation's senior citizens. How are these affected by cash-outs? The 1992 HRS cohort has been observed for over twenty years, so some inferences can be drawn. At first glance, those who cashed out do look worse off in 2012 compared to those who never separated or separated without cash-out. However, these individuals were also worse off in 1992, *before they cashed out.* This suggests some confounding of genuine cash-out effects with participants' prior attitudes and behaviors. Further work to isolate these relationships suggests that respondents having access to cashing out have more nonretirement job separations and less retirement than those without this access, but twenty years after reporting the availability of such an option, there are no statistically significant differences in wealth and income between these two groups. This is not the outcome we would have expected because of the literature that has focused on the harmful effects of pension cash-out. Further attention to this topic is warranted.

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Comment James M. Poterba

This chapter presents important new evidence on the circumstances under which US workers make preretirement withdrawals from their retirement saving accounts. "Leakage" is often cited as an important challenge to the provision of retirement security for US workers, but the causes and consequences of early distributions from retirement accounts have received relatively little attention. A number of policy proposals call for new restrictions on preretirement distributions. The impact of these proposals depends critically on the way pension participants respond to such changes; this study presents new information that bears on that issue.

Before turning to the specific findings in this chapter, it is important to note that it is very difficult to measure leakage from the US retirement saving system. Not all funds that are withdrawn from a given retirement plan are lost to the provision of retirement security. Withdrawals from one plan may be rolled to another retirement plan. Alternatively, a plan participant might withdraw assets from a DC plan and transfer the assets to another savings account outside the pension system. While this step might forego the benefits of tax-deferred accumulation, the transferred assets would still be available to support retirement consumption.

A number of recent studies have tried to estimate the rate of leakage from the US defined-contribution pension system. Munnell and Webb (2015) draw on data from the retirement plans administered by Vanguard. They estimate that cash-outs account for about 0.5 percent of the plan assets at the start of each year, hardship withdrawals for 0.3 percent, in-service withdrawals by individuals over the age of 59.5 for 0.2 percent, and loan defaults for 0.2 percent. Taken together, these various components of leakage represent about 1.5 percent of plan assets. If none of these withdrawals were redeployed in other forms of retirement saving, this rate of outflow would represent a substantial drag on aggregate retirement wealth accumulation. Munnell and Webb (2015) estimate that aggregate retirement wealth would fall by about 20 percent if there were no offsetting participant behaviors. One reason for studying leakage is to determine which retirement plan param-

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